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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/993,152      | 11/06/2001  | William B. Kerfoot   | 10578-003002        | 1164             |

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225 FRANKLIN ST  
BOSTON, MA 02110

EXAMINER

PRINCE, FRED G

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1724

DATE MAILED: 01/29/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/993,152

Applicant(s)

KERFOOT, WILLIAM B.

Examiner

Fred Prince

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 13-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 13-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Terminal Disclaimer***

1. The terminal disclaimer does not comply with 37 CFR 1.321(b) and/or (c)

because:

The person who has signed the disclaimer has not stated the extent of his/her interest, or the business entity's interest, in the application/patent. See 37 CFR 1.321(b)(3).

***Double Patenting***

2. Claims 13,14, 24-26, and 37-40 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 6,12, 19, and 27 of U.S. Patent No. 6,312,605. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter claimed in the patent claims may be construed broadly enough to encompass the limitation of the instant claims.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 14-23 and 27-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claims 14-23 recite the limitation "The method" in line 1. There is insufficient antecedent basis for this limitation in the claims.
6. The term "narrow diameter" in claim 16 is a relative term which renders the claim indefinite. The term "narrow diameter" is not defined by the claim, the specification

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does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Accordingly, the claim is considered vague and indefinite.

7. Claim 17 recites the limitation "the soil formation" in line 2. There is insufficient antecedent basis for this limitation in the claim.

8. Claim 21 recites the limitation "the aquifer" in line 2. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 22 recites the limitation "the aquifer" in line 2. There is insufficient antecedent basis for this limitation in the claim.

10. Claim 22 recites the limitation "the formation" in line 4. There is insufficient antecedent basis for this limitation in the claim.

11. Claim 23 recites the limitation "the well" in line 3. There is insufficient antecedent basis for this limitation in the claim.

12. Claim 29 recites the limitation "the compounds" in line 1. There is insufficient antecedent basis for this limitation in the claim.

13. Claim 30 recites the limitation "the removal" in line 1. There is insufficient antecedent basis for this limitation in the claim.

14. Claims 31-36 recite the limitation "The process" in line 1. There is insufficient antecedent basis for this limitation in the claims.

15. Claim 31 recites the limitation "the site" in lines 1 and 2. There is insufficient antecedent basis for this limitation in the claim.

16. Claim 34 recites the limitation "the site" in line 3. There is insufficient antecedent basis for this limitation in the claim.
17. Claim 35 recites the limitation "the site" in line 2. There is insufficient antecedent basis for this limitation in the claim.
18. Claim 36 recites the limitation "the microfine bubbles" in line 1. There is insufficient antecedent basis for this limitation in the claim.
19. Claim 36 recites the limitation "the volatile dissolved hydrocarbons" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.
20. Claim 36 recites the limitation "the substrate material" in line 4. There is insufficient antecedent basis for this limitation in the claim.
21. Claim 37 recites the limitation "the apparatus" in line 2. There is insufficient antecedent basis for this limitation in the claim.
22. Claim 37 recites the limitation "the gas" in line 10. There is insufficient antecedent basis for this limitation in the claim.
23. Claim 37 recites the limitation "the well casing" in line 13. There is insufficient antecedent basis for this limitation in the claim.
24. Claim 37 recites the limitation "the bubbles" in lines 13-14. There is insufficient antecedent basis for this limitation in the claim.
25. Claims 38-40 recite the limitation "The apparatus" in line 1. There is insufficient antecedent basis for this limitation in the claims.
26. Claims 27-28 are rejected as depending from a rejected claim.

***Conclusion***

27. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Prince whose telephone number is (703) 306-9169. The examiner can normally be reached on Monday-Thursday, 6:30-4:00; alt. Fridays 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Simmons can be reached on (703) 308-1972. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

  
Fred Prince  
Patent Examiner  
Art Unit 1724  
January 24, 2003